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<210> 2

<211> 594

<212> PRT

<213> Stachybotrys chartarum

<400> 2

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Gly	Val	Leu	Gly	Ile	Pro	Met	Asp	Thr	Gly	Ser	His	Pro	Ile	Glu	Ala
			20					25					30		
Val	Asp	Pro	Glu	Val	Lys	Thr	Glu	Val	Phe	Ala	Asp	Ser	Leu	Leu	Ala
			35					40					45		
Ala	Ala	Gly	Asp	Asp	Asp	Trp	Glu	Ser	Pro	Pro	Tyr	Asn	Leu	Leu	Tyr
			50			55					60				
Arg	Asn	Ala	Leu	Pro	Ile	Pro	Pro	Val	Lys	Gln	Pro	Lys	Met	Ile	Ile
65					70					75				80	
Thr	Asn	Pro	Val	Thr	Gly	Lys	Asp	Ile	Trp	Tyr	Tyr	Glu	Ile	Glu	Ile
				85					90					95	
Lys	Pro	Phe	Gln	Gln	Arg	Ile	Tyr	Pro	Thr	Leu	Arg	Pro	Ala	Thr	Leu
			100					105					110		
Val	Gly	Tyr	Asp	Gly	Met	Ser	Pro	Gly	Pro	Thr	Phe	Asn	Val	Pro	Arg

		115					120					125				
Gly	Thr	Glu	Thr	Val	Val	Arg	Phe	Ile	Asn	Asn	Ala	Thr	Val	Glu	Asn	
	130					135					140					
Ser	Val	His	Leu	His	Gly	Ser	Pro	Ser	Arg	Ala	Pro	Phe	Asp	Gly	Trp	
145					150					155					160	
Ala	Glu	Asp	Val	Thr	Phe	Pro	Gly	Glu	Tyr	Lys	Asp	Tyr	Tyr	Phe	Pro	
				165					170						175	
Asn	Tyr	Gln	Ser	Ala	Arg	Leu	Leu	Trp	Tyr	His	Asp	His	Ala	Phe	Met	
			180					185					190			
Lys	Thr	Ala	Glu	Asn	Ala	Tyr	Phe	Gly	Gln	Ala	Gly	Ala	Tyr	Ile	Ile	
		195					200					205				
Asn	Asp	Glu	Ala	Glu	Asp	Ala	Leu	Gly	Leu	Pro	Ser	Gly	Tyr	Gly	Glu	
	210					215					220					
Phe	Asp	Ile	Pro	Leu	Ile	Leu	Thr	Ala	Lys	Tyr	Tyr	Asn	Ala	Asp	Gly	
225					230					235					240	
Thr	Leu	Arg	Ser	Thr	Glu	Gly	Glu	Asp	Gln	Asp	Leu	Trp	Gly	Asp	Val	
				245					250					255		
Ile	His	Val	Asn	Gly	Gln	Pro	Trp	Pro	Phe	Leu	Asn	Val	Gln	Pro	Arg	
			260					265					270			
Lys	Tyr	Arg	Phe	Arg	Phe	Leu	Asn	Ala	Ala	Val	Ser	Arg	Ala	Trp	Leu	
	275						280					285				
Leu	Tyr	Leu	Val	Arg	Thr	Ser	Ser	Pro	Asn	Val	Arg	Ile	Pro	Phe	Gln	
	290					295					300					
Val	Ile	Ala	Ser	Asp	Ala	Gly	Leu	Leu	Gln	Ala	Pro	Val	Gln	Thr	Ser	
305					310					315					320	
Asn	Leu	Tyr	Leu	Ala	Val	Ala	Glu	Arg	Tyr	Glu	Ile	Ile	Ile	Asp	Phe	
				325					330					335		
Thr	Asn	Phe	Ala	Gly	Gln	Thr	Leu	Asp	Leu	Arg	Asn	Val	Ala	Glu	Thr	
			340					345					350			
Asn	Asp	Val	Gly	Asp	Glu	Asp	Glu	Tyr	Ala	Arg	Thr	Leu	Glu	Val	Met	
		355					360					365				
Arg	Phe	Val	Val	Ser	Ser	Gly	Thr	Val	Glu	Asp	Asn	Ser	Gln	Val	Pro	
	370					375					380					
Ser	Thr	Leu	Arg	Asp	Val	Pro	Phe	Pro	Pro	His	Lys	Glu	Gly	Pro	Ala	
385				390						395					400	
Asp	Lys	His	Phe	Lys	Phe	Glu	Arg	Ser	Asn	Gly	His	Tyr	Leu	Ile	Asn	
				405					410					415		
Asp	Val	Gly	Phe	Ala	Asp	Val	Asn	Glu	Arg	Val	Leu	Ala	Lys	Pro	Glu	
			420					425					430			
Leu	Gly	Thr	Val	Glu	Val	Trp	Glu	Leu	Glu	Asn	Ser	Ser	Gly	Gly	Trp	
		435					440					445				
Ser	His	Pro	Val	His	Ile	His	Leu	Val	Asp	Phe	Lys	Ile	Leu	Lys	Arg	
	450					455					460					
Thr	Gly	Gly	Arg	Gly	Gln	Val	Met	Pro	Tyr	Glu	Ser	Ala	Gly	Leu	Lys	
465					470											

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2820
2880
2905

<210> 4
<211> 627
<212> PRT
<213> *Bipolaris spicifera*

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20 25 30
Asp Asn Thr Pro Asp Glu Glu Lys Ala Ala Leu Ala Ser Ile Val Glu
35 40 45
Asp Asp Pro Ala Asp Val Val Asn Met Leu Lys Asp Trp Gln Ser Pro
50 55 60
Glu Tyr Pro Leu Ile Phe Arg Gln Pro Leu Pro Ile Pro Pro Ala Lys
65 70 75 80
Glu Pro Asn Lys Leu Thr Asn Pro Val Thr Asn Lys Glu Ile Trp Tyr
85 90 95
Tyr Glu Ile Val Ile Lys Pro Phe Thr Gln Gln Val Tyr Pro Ser Leu
100 105 110
Arg Pro Ala Arg Leu Val Gly Tyr Asp Gly Ile Ser Pro Gly Pro Thr
115 120 125
Ile Ile Val Pro Arg Gly Thr Glu Ala Val Val Arg Phe Ile Asn Gln
130 135 140
Gly Asp Arg Glu Ser Ser Ile His Leu His Gly Ser Pro Ser Arg Ala
145 150 155 160
Pro Phe Asp Gly Trp Ala Asp Asp Met Ile Met Lys Gly Glu Tyr Lys
165 170 175
Asp Tyr Tyr Tyr Pro Asn Asn Gln Ala Ala Arg Phe Leu Trp Tyr His
180 185 190
Asp His Ala Met His Val Thr Ala Glu Asn Ala Tyr Phe Gly Gln Ala
195 200 205
Gly Ala Tyr Leu Ile Thr Asp Pro Ala Glu Asp Ala Leu Gly Leu Pro
210 215 220
Ser Gly Tyr Gly Lys Tyr Asp Ile Pro Leu Val Leu Ser Ser Lys Tyr
225 230 235 240
Tyr Asn Ala Asp Gly Thr Leu Lys Thr Ser Val Gly Glu Asp Lys Ser
245 250 255
Val Trp Gly Asp Ile Ile His Val Asn Gly Gln Pro Trp Pro Phe Leu
260 265 270
Asn Val Glu Pro Arg Lys Tyr Arg Leu Arg Phe Leu Asn Ala Ala Val
275 280 285
Ser Arg Asn Phe Ala Leu Tyr Phe Val Lys Gln Asp Asn Thr Ala Thr
290 295 300
Arg Leu Pro Phe Gln Val Ile Ala Ser Asp Ala Gly Leu Leu Thr His
305 310 315 320
Pro Val Gln Thr Ser Asp Met Tyr Val Ala Ala Ala Glu Arg Tyr Glu
325 330 335
Ile Val Phe Asp Phe Ala Pro Tyr Ala Gly Gln Thr Leu Asp Leu Arg
340 345 350
Asn Phe Ala Lys Ala Asn Gly Ile Gly Thr Asp Asp Asp Tyr Ala Asn
355 360 365
Thr Asp Lys Val Met Arg Phe His Val Ser Ser Gln Thr Val Val Asp

2820 2880 2905


```

385          390          395          400
Lys Thr Gly Ile Asp His His Phe Arg Phe His Arg Thr Asn Ser Glu
          405          410          415
Trp Arg Ile Asn Gly Ile Gly Phe Ala Asp Val Gln Asn Arg Ile Leu
          420          425          430
Ala Lys Val Pro Arg Gly Thr Val Glu Leu Trp Glu Leu Glu Asn Ser
          435          440          445
Ser Gly Gly Trp Ser His Pro Ile His Val His Leu Val Asp Phe Arg
          450          455          460
Val Val Ala Arg Tyr Gly Asp Glu Ser Thr Arg Gly Val Met Pro Tyr
465          470          475          480
Glu Ser Ala Gly Leu Lys Asp Val Val Trp Leu Gly Arg His Glu Thr
          485          490          495
Val Leu Val Glu Ala His Tyr Ala Pro Trp Asp Gly Val Tyr Met Phe
          500          505          510
His Cys His Asn Leu Ile His Glu Asp Gln Asp Met Met Ala Ala Phe
          515          520          525
Asp Val Thr Lys Leu Gln Asn Phe Gly Tyr Asn Glu Thr Thr Asp Phe
          530          535          540
His Asp Pro Glu Asp Ser Arg Trp Ser Ala Arg Pro Phe Thr Ala Ala
545          550          555          560
Asp Leu Thr Ala Arg Ser Gly Ile Phe Ser Glu Ala Ser Ile Arg Ala
          565          570          575
Arg Val Asn Glu Leu Ala Leu Glu Gln Pro Tyr Ser Glu Leu Ala Gln
          580          585          590
Val Thr Ala Ser Leu Glu Gln Tyr Tyr Lys Thr Asn Lys Lys Arg Gln
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Ala Glu Cys Glu Asp Met Pro Ala Gly Pro Ile Pro Arg Tyr Arg Arg
610          615          620
Phe Gln Val
625

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<210> 8
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 <212> DNA
 <213> Amerosporium atrum

<220>
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 <222> (1)...(858)
 <223> n = A,T,C or G

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gtacaacagc gacggtaccc tcttcgaccc caaggacgag accgattcac tgttcggcga      180
tgtcatccac gtcaacggac agccatggcc ctactttaag gtcgagcctc gcaagtaccg      240
tctccgcttc ctcaatgctg ctatcagccg tgccttcaag ctcaactttcg aggctgatgg      300
caaagtgate aacttttcctg tcatcggtgc cgatactggt ctcttgacca agcctgttca      360
gacaagcaac cttgagatct ctatggcga gcgctgggag gttgtttttg acttcagcca      420
attttccggg aagaacgtca ccctcaagaa cggctcgcat gtgcagcacg atgaggacta      480
caactccacc gacaaagtca tgcagttcgt tgttggaag gatgttacga gccaggctgg      540
taatggcaac cttcccggct ctctgcgcac tgttccttc cctcctaaga aggggcggag      600
tcgacaggag cttcaagttc ggcagggacc ggtggccagt ggactgttaa tggcttgacc      660
ttcgtgatg tcaacaaccg catcctggct aagccccaa cgtggtgcca tcgaggtttt      720
gggagctttg agaacttcca gcggnngntg gtcttaccct tgtccacatc cacctgggtc      780
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gaagcacttt caagggcg

858

<210> 9

<211> 114

<212> PRT

<213> Amerosporium atrum

<220>

<221> VARIANT

<222> (1)...(114)

<223> Xaa = space of unknown number of aa

<400> 9

Thr Ala Glu Asn Ala Tyr Phe Gly Gln Ala Gly Phe Tyr Ile Leu His
1 5 10 15
Asp Pro Ala Glu Asp Ala Leu Gly Leu Pro Ser Gly Lys Tyr Asp Val
20 25 30
Pro Leu Ala Leu Ser Leu Lys Ala Tyr Asn Ser Asp Gly Thr Leu Phe
35 40 45
Asp Pro Lys Asp Glu Thr Asp Ser Leu Phe Gly Asp Val Ile His Val
50 55 60
Asn Gly Gln Pro Trp Pro Tyr Leu Lys Val Glu Pro Arg Lys Tyr Arg
65 70 75 80
Leu Arg Phe Leu Asn Ala Ala Ile Ser Arg Ala Phe Lys Xaa Val Trp
85 90 95
Glu Leu Glu Asn Thr Ser Ser Gly Gly Trp Ser Tyr Pro Val His Ile
100 105 110
His Leu

<210> 10

<211> 19

<212> PRT

<213> Stachybotrys chartarum

<220>

<221> VARIANT

<222> (1)...(19)

<223> Xaa = Any Amino Acid

<400> 10

Asp Tyr Tyr Phe Pro Asn Tyr Gln Ser Ala Arg Leu Leu Xaa Tyr His
1 5 10 15
Asp His Ala

<210> 11

<211> 13

<212> PRT

<213> Stachybotrys chartarum

<400> 11

Arg Gly Gln Val Met Pro Tyr Glu Ser Ala Gly Leu Lys
1 5 10

<210> 12

<211> 20

<212> DNA
<213> Artificial Sequence

<220>
<223> degenerated primer

<221> misc_feature
<222> (12)...(12)
<223> n = A,T,C or G

<221> misc_feature
<222> (15)...(20)
<223> n = T or C

<400> 12
tattactttc cnaantanca

20

<210> 13
<211> 20
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<220>
<223> degenerated primer

<221> misc_feature
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<223> n = A,T,C or G

<400> 13
tcgtatggca tnacctgncc

20

<210> 14
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<221> misc_feature
<222> (1)...(20)
<223> n = T or C

<400> 14
tggtaccang ancangct

18

<210> 15
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> oligonucleotide primer

<221> misc_feature
<222> (1)...(1)

<223> n = A or G

<221> misc_feature

<222> (10)...(10)

<223> n = T or G

<400> 15

ngactcgtan ggcatgac

18

<210> 16

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<221> misc_feature

<222> (1)...(21)

<223> n = A or G

<400> 16

tcgtggatga nnttgtgnca n

21

<210> 17

<211> 21

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<213> Artificial Sequence

<220>

<223> oligonucleotide primer

<221> misc_feature

<222> (2)...(2)

<223> n = A,T,C or G

<221> misc_feature

<222> (5)...(10)

<223> n = A or G

<221> misc_feature

<222> (13)...(13)

<223> n = T or C

<221> misc_feature

<222> (15)...(15)

<223> n = A or G

<400> 17

cnagacnacn tcnttnagac c

21

SEQUENCE OF ORF